

INCH-POUND

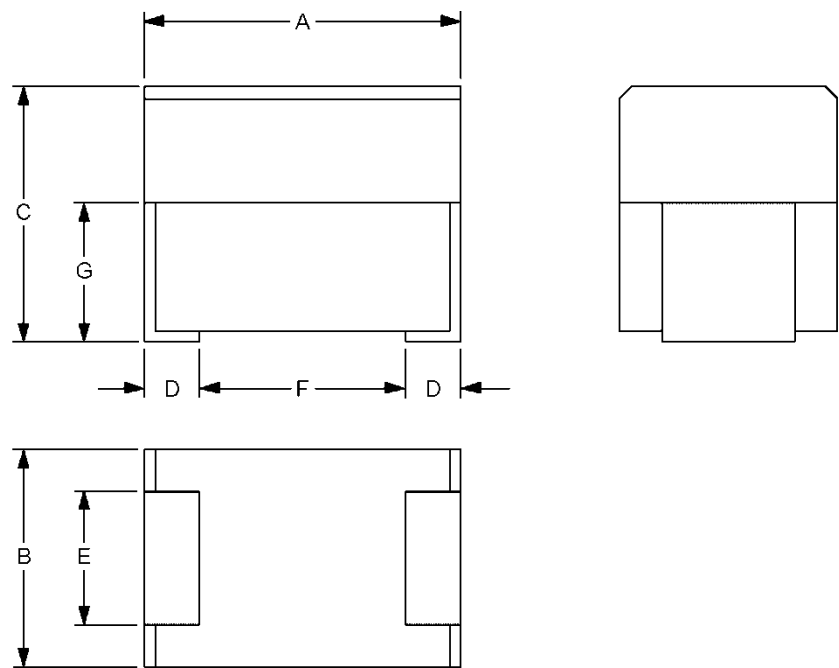
MIL-PRF-27/368B
12 April 2013
SUPERSEDING
MIL-PRF-27/368
14 July 2006

PERFORMANCE SPECIFICATION SHEET

INDUCTOR, POWER, SURFACE MOUNT

This specification is approved for use by all Departments
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall
consist of this specification sheet and MIL-PRF-27.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking shall be on the top of the case.

	Inches	mm
A	.166 to .190	4.22 to 4.83
B	.118 to .134	3.00 to 3.40
C	.118 to .138	3.00 to 3.51
D	.015 Min.	0.38 Min.
E	.054 to .078	1.37 to 1.98
F	.118 (Ref. Only)	3.00 (Ref. Only)
G	.066 (Ref. Only)	1.68 (Ref only)

FIGURE 1. Dimensions and configuration.

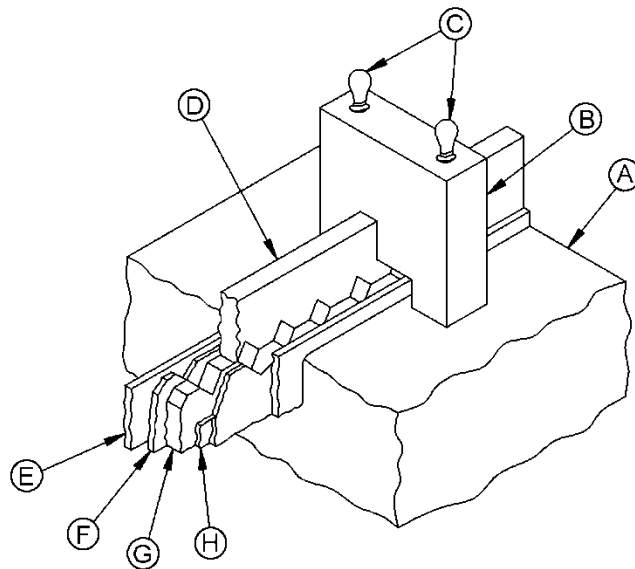
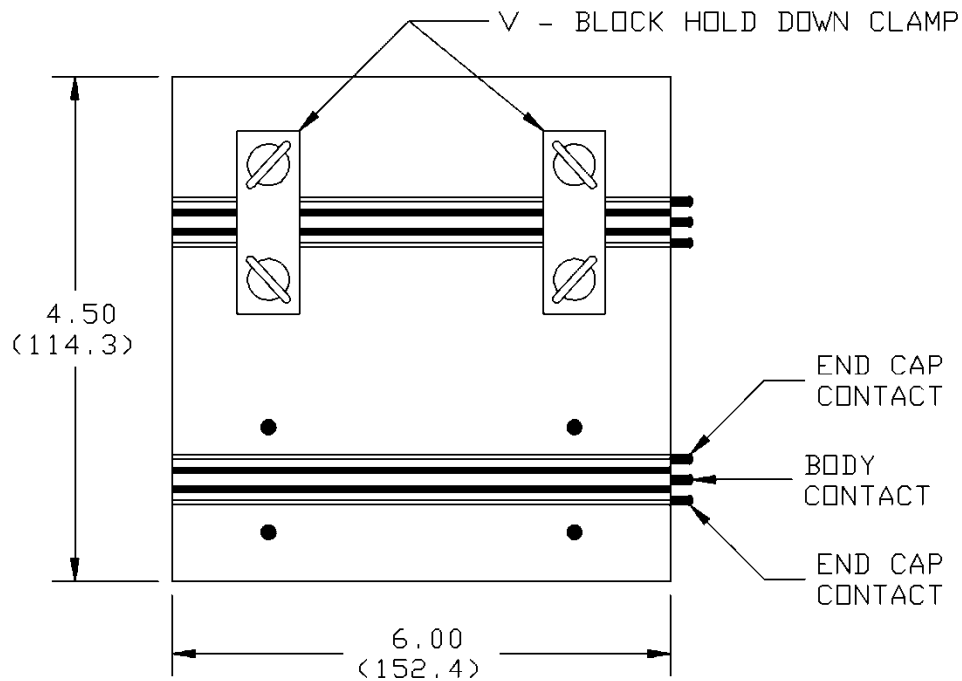
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TABLE I. Electrical characteristics (initial).

Dash number	Inductance (μ H) $\pm 10\%$ <u>1/</u>	DC resistance ohms (max)	Current rating (mA DC) (max)	Incremental current (mA DC) <u>2/</u>
-01	1.0	0.113	1050	2400
-02	1.2	0.199	1000	2158
-03	1.5	0.222	950	1980
-04	1.8	0.240	900	1828
-05	2.2	0.268	850	1697
-06	2.7	0.288	800	1513
-07	3.3	0.323	750	1397
-08	3.9	0.347	700	1250
-09	4.7	0.401	650	1131
-10	5.6	0.437	650	1060
-11	6.8	0.472	600	990
-12	8.2	0.548	600	871
-13	10	0.608	550	772
-14	12	0.670	550	752
-15	15	0.780	450	693
-16	18	0.875	400	614
-17	22	1.200	370	515
-18	27	1.404	330	465
-19	33	1.578	300	425
-20	39	1.848	280	376
-21	47	2.064	260	366
-22	56	2.268	240	336
-23	68	3.408	220	297
-24	82	3.648	200	267
-25	100	4.320	180	238
-26	120	6.000	160	208
-27	150	6.432	140	183
-28	180	8.400	120	158
-29	220	9.680	120	143
-30	270	12.720	100	129
-31	330	15.240	90	118

1/ Measured at 1 V with no dc current at 1 KHz.2/ The dc current at which the inductance will decrease by a maximum of 5 percent from the inductance at zero dc current.TABLE II. Electrical characteristics (final).

Inspection group	Allowable percent variation from the initial measurement	
Qualification inspection:	Inductance	DC resistance
	Group II ± 5 Group III ± 5 Group IV ± 5	± 3 (+.001 ohm) ± 2 (+.001 ohm) -----



ENLARGED CUT-AWAY OF CLAMP

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Metric equivalents are in parentheses.

Legend	
LTR	Description
A	G-10 base
B	Upper V-block hold-down clamp
C	Clamp screws
D	Upper V-block (body contact)
E	End cap contact retaining wall
F	End cap contact V-block (in contact with E)
G	Lower V-block (body contact)
H	G-10 insulators (separating G from F/E)

FIGURE 2. Test fixture for insulation resistance, dielectric withstanding voltage, and barometric pressure.

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REQUIREMENTS:

Dimensions and configuration: See figure 1.

Weight: 1.5 grams maximum.

Case: Grade 5, encapsulated.

Operating temperature range: -55°C to +130°C, Class S.

Temperature rise (at +90°C): +40°C, method of mounting shall be on test substrates that provide test pieces one inch minimum separation.

Altitude: 70,000 feet.

Resistance to soldering heat: Method 210, test condition B, MIL-STD-202. Depth of immersion shall be the entire mounting surface for 4 to 5 seconds.

Bond strength: Method 2011, test condition F, MIL-STD-883.

Force: 2 pounds.

Dielectric withstanding voltage: Method 301 of MIL-STD-202, test voltage 200 V rms.

Barometric pressure: Method 105, test condition C, MIL-STD-202, (70,000 feet), test voltage 80 V rms.

Insulation resistance: Method 302, MIL-STD-202, 1000 megohms minimum at 100 V dc.

Electrical characteristics (initial): See table I.

Vibration, high frequency: Method 204, test condition D, MIL-STD-202.

Moisture resistance: Method 106, MIL-STD-202, method of mounting shall be on test substrates that provide test pieces one inch minimum separation.

Test fixture: Test shall be performed using test fixture shown on figure 2, or equivalent.

Quality Assurance Provisions:

Extent of qualification: Qualification testing and approval to M27/367-61 shall be sufficient to grant qualification to: M27/367-01 through M27/367-61 inclusive and M27/368-01 through M27/368-31 inclusive and M27/370-01 through M27/370-52 inclusive, all parts.

Marking location: See figure 1.

Part or Identifying Number (PIN): M27/368-(dash number from table I).

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Referenced documents. In addition to MIL-PRF-27, this document references the following:

MIL-STD-202
MIL-STD-883

MIL-PRF-27/368B

Custodians:
Army - CR
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC
(Project 5950-2013-023)

Review activity:
Army – MI

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